REMARKS

Claims 1-4 are pending in the instant application. Claims 1-4 have been rejected. Claim 4 has been amended. No new matter has been added by this amendment. Reconsideration is respectfully requested in light of these amendments and the following remarks.

I. Rejection of Claims Under 35 U.S.C. §112

Claim 4 has been rejected under 35 U.S.C. 112, second paragraph, as being indefinite. It is suggested that claim 4 recites the phrase "The computer program of claim 3" which lacks clarity as to whether the claim is intended to only refer to the program or to the computer-readable medium as set forth in claim 3. Clarification is requested. To facilitate the prosecution of this application, Applicants have amended claim 4 to clarify dependency from the computer-readable medium of claim 3. In light of this amendment, it is respectfully requested that this rejection be withdrawn.

II. Rejection of Claims Under 35 U.S.C. §102

Claims 1-4 remain rejected under 35 U.S.C. 102(b) as being anticipated by Troyanskaya et al. ((2001) *Bioinformatics* 17:520-525) with additional support from online Merriam-Webster Dictionary ("Gaussian" definition) for the reasons of record.

Claims 1 and 3 remain rejected under 35 U.S.C. 102(a) as being anticipated by Hytopoulos et al. (US 2002/0169560 A1) with additional support from online Merriam-Webster dictionary ("Gaussian" definition) for the reasons of record.

The Examiner suggests that Applicants' arguments filed October 2, 2007 concerning Gaussian mixture clustering is unpersuasive because such limitations are not found in the claims. Applicants respectfully disagree and traverse these rejections.

Applicants respectfully submit that while the basis of the Examiner's argument is that the cited references teach the normalization of data and "Gaussian" is defined as "being or having the shape of a normal curve or a normal distribution," the claimed invention is not merely drawn to clustering data by "Gaussian" distributions or models. Rather, the claimed invention provides for "clustering the data by a <u>Gaussian mixture clustering (GMC) model</u>" [emphasis added]. As defined by the specification, Gaussian mixture clustering <u>imposes a mixture of multivariate normal (Gaussian) distributions</u> (see pages 11-15). Such mixture clustering is neither taught nor suggested by Troyanskaya et al. or Hytopoulos et al.

During patent examination, the pending claims must be given the broadest reasonable interpretation <u>consistent with the specification</u>. *In re Morris*, 127 F.3d 1048, 1054, 44 USPQ2d 1023, 1027 (Fed. Cir. 1997); *In re Prater*, 415 F.2d 1393, 162 USPQ 541 (CCPA 1969). See MPEP 2173.05(a). In this regard, the specification clearly describes the Gaussian mixture clustering model to clearly distinguish this model from the "normalization" of data described by the cited references. Thus, the teachings of Troyanskaya et al. and Hytopoulos et al. cannot be reasonably considered to anticipate the subject matter of the present invention. It is therefore respectfully requested that these rejections under 102(a) and 102(b) be reconsidered and withdrawn.

III. Rejection of Claims Under 35 U.S.C. §103

Claims 1-4 have been rejected under 35 U.S.C. 103(a) as being unpatentable over Hytopoulos et al. (US 2002/0169560 A1) with additional support from online Merriam-Webster dictionary ("Gaussian" definition) in view of Cereghini et al. (US 6,496,834 B1). It is suggested that this rejection is maintained and reiterated for reasons of record. Applicants respectfully disagree and traverse this rejection.

As discussed *supra*, the teachings of Hytopoulos et al. fail to provide the step of clustering data by a <u>Gaussian mixture clustering model</u> as described by the present specification. Similarly, Cereghini et al. do not use a Gaussian mixture cluster model in a method for imputing missing values in microarray data. Given the deficiencies in the combined teachings of the cited prior art, these references cannot be held to make the present invention obvious under 35 U.S.C. 103(a). It is therefore respectfully requested that this rejection be reconsidered and withdrawn.
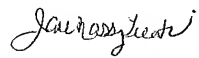
IV. Conclusion

Applicants believe that the foregoing comprises a full and complete response to the Office Action of record. Accordingly,

favorable reconsideration and subsequent allowance of the pending

claims is earnestly solicited.

                              Respectfully submitted,

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